

## Inspection of the specimen identified as *Cosmopterix flavofasciata* by Fletcher (1933) (Lepidoptera, Cosmopterigidae)

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**Abstract** Fletcher's specimen, which is very important as the evidential specimen for the hostplant of *Cosmopterix attenuatella* (= *C. flavofasciata*) in his publication (1933), has not been located or subjected to modern examination. A specimen that is probably the same species as in his description has now been found among the material preserved in the Natural History Museum, London (BMNH). After careful examination of the external characters it is concluded that Fletcher's specimen is a different species from *attenuatella*.

**Key words** Cosmopterigidae, *Cosmopterix*, host plant, *Cyperus rotundus*, Fletcher's specimen, Pusa.

Fletcher (1921) noted that he collected *Cosmopterix mimetis* Meyrick (a junior synonym of *C. attenuatella* Walker) at Pusa, India, from 25 September - 8 December 1916 by rearing the larvae mining in motha grass (*Cyperus rotundus*). Subsequently he (1933) recorded *Cosmopterix flavofasciata* Wollaston (a junior synonym of *C. attenuatella* Walker) reared from leaves of *Cyperus rotundus* and provided figures of the adult, larva and pupa. Although this record was cited later in the biology of *C. crassicervicella* (a closely allied species to *attenuatella*) by Chretien (1917) in part, it is important as the only knowledge of the host plant of *C. attenuatella* up to the present (Hodges, 1962: 25; Hodges, 1978: 27; Koster and Sinev, 2003: 116). Generally the identification of *Cosmopterix* species by external characters alone is fraught with difficulty: it is very likely to be inaccurate except in special cases. In spite of this, apparently nobody has examined the genitalia of Fletcher's specimens. Through the courtesy of Mr K. Tuck of the BMNH, I had the opportunity to examine the specimen that appears to be the one treated by Fletcher. It is clearly different from *C. attenuatella*.

### *Cosmopterix* sp. (not *Cosmopterix attenuatella* Walker)

*Cosmopterix mimetis*: Fletcher, 1920: 120.

*Cosmopterix flavofasciata*: Fletcher, 1933: 1–2, pl. 1.

♂. Wing length 3.5 mm. Antenna stout, black, with interrupted white lines from base to 1/3, apical 1 black, 1 white, 3 black, 0.5 white, 0.5 black, 0.5 white. Head and thorax with three white lines.

Forewing less narrow than in *attenuatella*, W/L=0.16\*\*; fuscous; subcostal line from base to 2/3 of basal half area, median and subdorsal lines distinct, about 1/4 length of

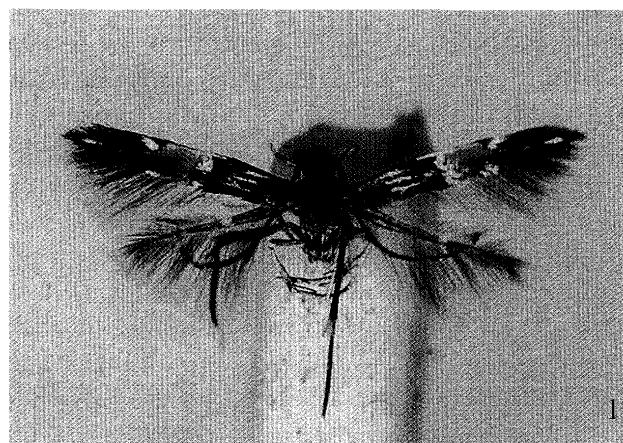


Fig. 1. *Cosmopterix* sp., ♂ (the specimen treated by Fletcher as *C. attenuatella*.)

Fig. 2. Labels attached to the specimen.

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\*\* W/L=width/length of forewing

basal half area, subdorsal line nearly under median line; anterior metallic fascia oblique outwards, with a small black dot; postmedian band yellow tinged with orange, antero-costal line extending anteriorly from post-median band to 2/3 of basal half area, caudal projection horizontal, extending apically beyond posterior metallic spots; terminal line divided into two, basal part short and weak, apical part rather broad; apical cilia blackish without apical spot.

Specimen examined. 1 ♂, “Mining Motha [*Cyperus rotundus*] leaves, 24. x. 1918, Pusa Boyd Coll.”. “Brit. Mus. 1934-38”. “Abdomen missing”. “*Cosmopterix flavofasciata* W., teste T.B.F.”

### Discussion

This specimen bearing Fletcher's identification label is clearly identical with his drawing (1933, pl. 1) in the stout antenna and the character of the terminal line of the forewing. Furthermore it differs from *C. attenuatella* as follows. 1) The character of the antenna is mentioned above, but in *attenuatella* it is slender and with the apical 1 or 2 segments black, 3 or 2 segments white, 5 segments black, 1 white, 1 black. 2) The forewing is broader than that of *attenuatella*, W/L = 0.16 (in *attenuatella* more slender, W/L = 0.11). 3) The terminal line is divided into two, the basal part weak and the apical part rather broad, without an apical spot (in *attenuatella* one terminal line and an apical spot are present). Although the specimen is missing its abdomen, this specimen is clearly a male by its strong frenulum.

At the present time it is not possible to identify this specimen conclusively. But it is clear that the species is not true *attenuatella*, and it is anticipated that the specimen will be identified in the future by molecular analysis. It is strange that there is no genuine information on the biology of *attenuatella* even though it is a common and widespread species in the world. The hostplant of *attenuatella* might be unusual.

### Acknowledgments

I wish to express my cordial thanks to Mr K. Tuck (BMNH) for the loan of this valuable specimen and to Mr J. C. Koster (Netherlands Centre for Biodiversity Naturalis) for his esteemed advice on the specimen.

### References

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Fletcher, T. B. 1933. Life-histories of Indian Microlepidoptera (second series). *Imper. Council Agric. Res. Sci. Monogr.* 4: 1-85, 77 pls.

### 摘 要

Fletcher (1933) により *Cosmopterix flavofasciata* (ホソカザリバ) として扱われた標本の検証 (鱗翅目, カザリバガ科) (黒子 浩)

Fletcher (1933) により *Cosmopterix flavofasciata* (= *C. attenuatella*) として扱われた標本はインドにおいてスゲ科のハマスゲより得られたもので、以来この記録が本種の食草として引用されてきていた。ところが今回見つかったFletcherによる同定ラベルのついた標本は明らかに1933年出版の彼の成虫図とは一致するが、前翅形、触角や斑紋の特徴からホソカザリバとは別種と考えられた(腹部は紛失していて交尾器を調べることはできず、種名の決定には至らなかったが)。したがって本種の食草の原典とされるFletcher (1933) の引用は不適切になる。わが国にもごく普通に生息し、世界中に広く分布する本種の信頼できる食草が未だもって判明していないということは不思議なことである。意外なところに答えはひそんでいるのかも知れない。

(Received June 13, 2011. Accepted August 8, 2011)